Information Requested by GAO at the August 2, 2018 Call on IRIS

1) List of EPA participants for the call

- Deirdre Murphy, Senior Toxicologist (OAR/OAQPS)
- Amy Vasu, Environmental Health Scientist (OAR/OAQPS)
- Kelly Rimer, Leader, Air Toxics Assessment Group (OAR/OAQPS)
- Bob Hetes, Senior Advisor (OAR/OAQPS)
- Marc Vincent, OAR Liaison, (OAR IO)

2) Description of prioritization approach for dose-response values

For the CAA section 112(f)(2) risk reviews, as well as other assessments performed by OAR/OAQPS, we perform health risk assessments for the CAA-identified hazardous air pollutants. As the EPA and the IRIS program do not have up-to-date hazard and dose-response assessments for all the HAPs, we also draw on publicly available assessments developed by other government agencies in a conceptually similar way, including a public review step, and that reflect sound science, independent external peer review and current knowledge. This approach is aimed at incorporating into our assessments the best available science with respect to dose-response information.

Application of this approach generally results in the following priority order: 1) U.S. EPA IRIS, 2) ATSDR, 3) California EPA, and 4) other sources. Please note that these dose-response values also undergo a public process that allows review and comment prior to final values being issued.

Documentation of this approach, as applied in the CAA section 112(f)(2) reviews, is in the EPA report titled "Risk and Technology (RTR) Risk Assessment Methodologies: For Review by the EPA's Science Advisory Board: Case Studies – MACT I Petroleum Refining Sources and Portland Cement Manufacturing." June 2009. EPA-452/R-09-006. This approach is also documented in the risk assessment technical support document for each RTR NESHAP rulemaking (and included in the rulemaking docket).

This approach was presented to the EPA SAB in 2009. In a May 7, 2010 memo to Administrator Jackson, regarding review of EPA's RTR assessment methodologies, the EPA SAB panel "found EPA's approach to selecting dose-response chronic toxicity values to be generally sound, but recommends the Agency more closely scrutinize values that emerge as drivers of risk assessment results." (p.ii) In the same memo, they also noted:

> The preferred database for chronic dose-response data is and should be the IRIS database. However, some chemicals of interest do not have IRIS values, and values for other chemicals have not been reviewed recently. The Panel urges the Agency to address these gaps and provide the resources necessary to maintain the updating process. Additional sources of data may also be considered if they have undergone adequate and rigorous scientific peer review." (p. 5)

3) Chemical assessments requested by OAR (along with other EPA Offices) in 2015, for consideration for inclusion in ORD's December 2015 IRIS multi-year agenda. The identified level of priority (qualitative) is also shown.

Chemical	Priority	OAR Office Requesting
Acetaldehyde	High	OAQPS and OTAQ
Acrylonitrile	Medium	OAQPS
Ammonia	Low	OTAQ
Arsenic	High	OAQPS
Benzo(a)pyrene	High	OAQPS and OTAQ
n-Butanol	Low	OTAQ
Cadmium and compounds	High	OAQPS and OTAQ
Carbonyl sulfide	Medium	OAQPS
Chlorobenzene	Medium	OAQPS
Chloroform	High	OAQPS
1,2-Dichloroethane	Low	OAQPS
Ethylbenzene	High	OTAQ
Ethylene oxide	Medium	OAQPS
Formaldehyde	High	OAQPS and OTAQ
Manganese	Low	OTAQ
Mercury	High	OAQPS
Methylmercury	High	OAQPS
Naphthalene	High	OAQPS and OTAQ
Nickel (soluble salts)	High	OAQPS and OTAQ
PAH mixtures	High	OAQPS and OTAQ
Styrene	Low	OTAQ
2,3,7,8-Tetrachlorodibenzo-p-dioxin	High	OAQPS
Vanadium pentoxide	Medium	OTAQ
Vinyl acetate	Low	OAQPS

4) Listing of statutory and court-ordered rulemaking deadlines (for rules requiring risk analysis)

CAA section 112(f)(2) requires risk reviews for those source categories for which MACT standards are required. We have finalized risk and technology (RTR) NESHAP rulemakings for about 61 source categories. RTR NESHAP rulemakings are required for about 55 additional source categories. Of these, 42 have court-ordered deadlines:

- 7 final RTRs required by Dec. 31, 2018: categories selected to meet this deadline: Wood Building Products, Leather Finishing, Fabric Printing (coating), Large Appliances (coating), Metal Furniture (coating), Friction Materials and Wet-Formed Fiberglass Mat Production
- 20 final RTRs required by March 13, 2020
- 6 final RTRs required by June 30, 2020
- 9 final RTRs required by October 1, 2021

Of the remaining source categories, 3 have statutory deadlines for dates prior to 2018 and 10 are not yet due.

CAA section 129 applies to any source burning any nonhazardous solid waste as defined under the nonhazardous solid waste definitional rule (40 CFR Part 241). Six section 129 rules have been established and have emission limits based on MACT. Under CAA section 129, EPA regulates both HAP and criteria pollutants (specifically PM, SOx, NOx, HCl, CO, lead, cadmium, mercury, and dioxins/furans). Section 129 rules are subject to a one-time residual risk review. Statutory deadlines for at least five of the rules have already passed. For the remaining one, CISWI, since we completed the original rule in 2003 and then, due to litigation, replaced the rule in 2012, the statutory deadline for risk review could be interpreted to not yet be due.